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show files
File 155:MEDLINE(R) 1966-2001/Nov W4
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File 351:Derwent WPI 1963-2001/UD,UM &UP=200163
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?ds

Set     Items   Description
S1     110579   HIV1 OR HIV()1
S2       1772   CD4? (3N) DEFICIEN?
S3     448665   IMMUNEDEFICIEN? OR IMMUNODEFICIEN? OR ((IMMUNO OR IMMUNE)(-
             )DEFICIEN?)
S4       2104   SIALIC()ACID(3N)BIND?
S5      93598   HEMAGGLUTIN?
S6      56715   ORTHOMYXOVIR? OR PARAMYXOVIR?
S7      30579   INACTIVAT? (3N) (CELL? ? OR VIRUS? ?)
S8     750654   NEISSERIA OR COLI
S9     469500   S1-S3
S10     95315   S4 OR S5
S11      1100   S9 AND S10
S12       210   S11 AND INDUC?
S13        92   S11 AND STIMULA?
S14       265   S12 OR S13
S15       209   RD S14 (unique items)
S16         3   S15 AND S7
S17       178   S11 AND (S6 OR S8)
S18        41   S17 AND (INDUC? OR STIMULA?)
S19        36   RD S18 (unique items)
S20        38   S16 OR S19
?t 20/7/all

 20/7/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10542123   20164492   PMID: 10698966
 P-glycoprotein-overexpressing multidrug-resistant cells are resistant to
infection by enveloped viruses that enter via the plasma membrane.
  Raviv Y; Puri A; Blumenthal R
  Intramural Research Support Program SAIC Frederick, Laboratory of
Experimental and Computational Biology, National Cancer Institute,
Frederick, MD 21702, USA. yraviv@mail.ncifcrf.gov
  FASEB journal (UNITED STATES) Mar 2000, 14 (3) p511-5, ISSN
0892-6638   Journal Code: FAS
  Contract/Grant No.: NO1-56000, PHS
  Languages: ENGLISH
  Document type: Journal Article
  Record type: Completed
  The multidrug resistance gene product P-glycoprotein confers drug
resistance to tumor cells by acting as a transporter that blocks the entry
into the cell of a great variety of drugs and hydrophobic peptides. In this
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study we find that in drug-resistant cells, the insertion of the influenza virus fusion protein (hemagglutinin -2) into the plasma membrane is blocked and that the fusion of the viral envelope with the plasma membrane of these cells is impaired. Multidrug-resistant cells display significant resistance to infection by envelope viruses that invade cells by fusion with the plasma membrane, but not to infection by pH-dependent viruses that penetrate cells by fusion with endocytic vesicles. These observations suggest that multidrug resistance phenomena may protect cells from infection by a large group of disease-causing viruses that includes human immunodeficiency virus, herpes simplex virus, and some cancer-inducing retroviruses.

Record Date Created: 20000410

20/7/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09632264 98095697 PMID: 9432975

Interleukin 10 secretion and impaired effector function of major histocompatibility complex class II-restricted T cells anergized in vivo.

Buer J; Lanoue A; Franzke A; Garcia C; von Boehmer H; Sarukhan A

Institut Necker, Institut National de la Sante et de la Recherche Medicale 373, Paris, France.

Journal of experimental medicine (UNITED STATES) Jan 19 1998, 187 (2) p177-83, ISSN 0022-1007 Journal Code: I2V

Languages: ENGLISH

Document type: Journal Article

Record type: Completed

Continuous antigenic stimulation in vivo can result in the generation of so-called "anergic" CD4(+) or CD8(+) T cells that fail to proliferate upon antigenic stimulation and fail to develop cytolytic effector functions. Here we show that class II major histocompatibility complex-restricted T cells specific for influenza hemagglutinin (HA) that become anergic in mice expressing HA under control of the immunoglobulin kappa promoter exhibit an impaired effector function in causing diabetes in vivo, as compared to their naive counterparts, when transferred into immunodeficient recipients expressing HA under the control of the insulin promoter. Furthermore, HA-specific T cells anergized in vivo contain higher levels of interleukin (IL)-4 messenger RNA (mRNA) than naive and recently activated T cells with the same specificity and more than a 100-fold higher levels of IL-10 mRNA. The higher expression of the IL-10 gene is also evident at the protein level. These findings raise the interesting possibility that T cells rendered anergic in vivo have in fact become regulatory T cells that may influence neighboring immune responses through the release of IL-10.

Record Date Created: 19980203

20/7/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09330304 97316839 PMID: 9174113

Inhibition of influenza virus fusion by polyanionic proteins.

Schoen P; Corver J; Meijer DK; Wilschut J; Swart PJ

Groningen Utrecht Institute for Drug Exploration (GUIDE), University of Groningen, Department of Physiological Chemistry, Faculty of Medical Sciences, The Netherlands. p.j.schoen@med.rug.nl

Biochemical pharmacology (ENGLAND) Apr 4 1997, 53 (7) p995-1003,
ISSN 0006-2952 Journal Code: 9Z4
Languages: ENGLISH
Document type: Journal Article
Record type: Completed

Anionic charge-modified human serum albumin (HSA) has previously been shown to exert potent in vitro activity against human immunodeficiency virus type 1 (HIV -1). In these studies, introduction of the additional negative charges was performed by derivatizing the epsilon-amino groups of lysine residues with succinic (Suc-HSA) or cis-aconitic anhydride (Aco-HSA), by which primary amino groups are replaced with carboxylic acids. The anti- HIV - 1 activity was related to inhibition of gp41-mediated membrane fusion. Here, we investigated the activity of aconitylated and succinylated proteins on influenza virus membrane fusion, which is mediated by the viral membrane glycoprotein hemagglutinin (HA). Aco-HSA and Suc-HSA markedly inhibited the rates and extents of fusion of fluorescently labeled virosomes bearing influenza HA, with target membranes derived from erythrocytes. The inhibitory activity was dependent on the overall negative-charge density; HSA modified with 36 or less extra negative charges failed to inhibit fusion. The inhibition of fusion showed a certain degree of specificity for the protein carrying the negative charges: polyanionic HSA and beta-lactoglobulin A derivatives had fusion-inhibitory activity, whereas succinylated BSA, lactalbumin, lactoferrin, lysozyme, and transferrin were inactive. Aco60-HSA and Aco-beta-lactoglobulin A inhibited influenza virus membrane fusion in a concentration-dependent manner, IC50 values being about 4 and 10 microg/mL, respectively. HA-mediated membrane fusion is pH dependent. Aco60-HSA did not induce a shift in the pH threshold or in the pH optimum. Fusion with liposomes of another low pH-dependent virus, Semliki Forest virus, was not specifically affected by any of the compounds reported here. In view of some structural and functional similarities between influenza HA and the HIV -1 gp120/gp41 complex, it is tempting to postulate that the current results might have some implications for the anti-HIV -1 mechanism of polyanionic proteins.

Record Date Created: 19970617

20/7/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09319767 97240286 PMID: 9085732
Interleukin-7-enhanced cytotoxic T lymphocyte activity after viral infection in marrow transplanted mice.

Abdul-Hai A; Ben-Yehuda A; Weiss L; Friedman G; Zakay-Rones Z; Slavin S; Or R
Department of Bone Marrow Transplantation, Hadassah University Hospital, Jerusalem, Israel.

Bone marrow transplantation (ENGLAND) Mar 1997, 19 (6) p539-43,
ISSN 0268-3369 Journal Code: BON
Languages: ENGLISH
Document type: Journal Article
Record type: Completed

Lethally irradiated BALB/c mice were reconstituted by syngeneic bone marrow transplantation (BMT), and injected with recombinant interleukin 7 (rIL-7), recombinant interleukin 2 (rIL-2), or saline 10 days post-transplantation. Intranasal infection with A/PR8/34 influenza virus 2 weeks after BMT was associated with the highest survival rate in the rIL-7

treated group. The protective mechanism elicited by rIL-7, as manifested by very low virus titers in the lung, involves T and B cell functions. High hemagglutinin inhibition antibody levels were observed on days 7 and 12 post-challenge in the rIL-7 mice. Moreover, the anti-influenza cytotoxic T lymphocyte activity was induced primarily by rIL-7, leaving the effect of rIL-2 on the same level as that of the control. Thus, rIL-7 promotes both T cell-mediated function and B cell production during the immunodeficient state after BMT. This cytokine may prove a potential immunotherapeutic modality in BMT recipients.

Record Date Created: 19970610

20/7/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08382135 95038294 PMID: 7524883

Immunogenicity of microbial peptides grafted in self immunoglobulin molecules.

Bona C; Brumeanu TD; Zaghouani H

Department of Microbiology, Mount Sinai School of Medicine, New York, NY 10029-6574.

Cellular and molecular biology (FRANCE) 1994, 40 Suppl 1 p21-30, ISSN 0145-5680 Journal Code: BNA

Languages: ENGLISH

Document type: Journal Article; Review; Review, Tutorial

Record type: Completed

The advent of genetic engineering has allowed for the expression and production of recombinant proteins carrying short immunogenic epitopes of foreign antigens. These antigenized molecules represent valuable tools to investigate the molecular basis of antigen fragmentation, generation and presentation of peptide to lymphocytes, the induction of epitope specific immunity and potentially the development of a new generation of vaccines. Recently, we expressed viral epitopes on immunoglobulin molecules by replacing the D segment of a variable region of the heavy chain (VH) gene with a B cell epitope from the V3-loop of HIV -1 envelope protein, as well as a cytotoxic T lymphocyte (CTL) and a T helper epitope from influenza virus nucleoprotein and hemagglutinin, respectively. The T cell peptides generated from the immunoglobulin molecules produced by cells transfected with chimeric V genes, activated specific T cells as they do when generated from viral proteins. Possible practical applications for the development of prophylactic and immunotherapeutic reagents are envisioned for immunoglobulin molecules bearing foreign epitopes. (32 Refs.)

Record Date Created: 19941229

20/7/6 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07145716 94016828 PMID: 8411349

Relative affinity of the human parainfluenza virus type 3 hemagglutinin -neuraminidase for sialic acid correlates with virus- induced fusion activity.

Moscona A; Peluso RW

Department of Pediatrics, Mount Sinai School of Medicine, New York, New York 10029-6574.

Journal of virology (UNITED STATES) Nov 1993, 67 (11) p6463-8, ISSN 0022-538X Journal Code: KCV

Contract/Grant No.: AI-22116, AI, NIAID; AI-31971, AI, NIAID
Languages: ENGLISH
Document type: Journal Article
Record type: Completed

The ability of enveloped viruses to cause disease depends on their ability to enter the host cell via membrane fusion events. An understanding of these early events in infection, crucial for the design of methods of blocking infection, is needed for viruses that mediate membrane fusion at neutral pH, such as paramyxoviruses and human immunodeficiency virus. Sialic acid is the receptor for the human parainfluenza virus type 3 (HPF3) hemagglutinin -neuraminidase (HN) glycoprotein, the molecule responsible for binding of the virus to cell surfaces. In order for the fusion protein (F) of HPF3 to promote membrane fusion, the HN must interact with its receptor. In the present report, two variants of HPF3 with increased fusion-promoting phenotypes were selected and used to study the function of the HN glycoprotein in membrane fusion. Increased fusogenicity correlated with single amino acid changes in the HN protein that resulted in increased binding of the variant viruses to the sialic acid receptor. These results suggest that the avidity of binding of the HN protein to its receptor regulates the level of F protein-mediated fusion and begin to define one role of the receptor-binding protein of a paramyxovirus in the membrane fusion process.

Record Date Created: 19931124

112 1st

20/7/7 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05294619 89311817 PMID: 2787416

The influence of HIV infection on antibody responses to a two-dose regimen of influenza vaccine.

Miotti PG; Nelson KE; Dallabetta GA; Farzadegan H; Margolick J; Clements ML

Department of Epidemiology, Johns Hopkins School of Hygiene and Public Health, Baltimore, MD 21205.

JAMA (UNITED STATES) Aug 11 1989, 262 (6) p779-83, ISSN 0098-7484 Journal Code: KFR

Contract/Grant No.: AI-72634, AI, NIAID; RR00722, RR, NCRR
Languages: ENGLISH
Document type: Journal Article
Record type: Completed

We studied whether a two-dose regimen of inactivated influenza virus vaccine was more effective than a single dose in inducing protective hemagglutination -inhibition antibody responses in patients infected with human immunodeficiency virus (HIV). Participants included subjects with acquired immunodeficiency syndrome, subjects with acquired immunodeficiency syndrome-related complex, and HIV-seropositive individuals with either lymphadenopathy only or no symptoms. Control subjects were HIV-seronegative heterosexuals and HIV-seronegative homosexuals. Two doses of inactivated influenza vaccine containing 15 micrograms of the hemagglutinin of influenza A/Taiwan/1/86(H1N1), A/Leningrad/360/86(H3N2), and B/Ann Arbor/1/86 were administered intramuscularly in the deltoid region 1 month apart. The second dose of vaccine did not significantly increase the frequency or magnitude of antibody responses of either HIV-seropositive or HIV-seronegative subjects over that achieved by a single dose. The two-dose regimen induced a protective level (greater than or equal to 1:64) of hemagglutination

-inhibition antibody to influenza A(H1N1) or (H3N2) virus less often in subjects with symptomatic HIV infection than in uninfected control subjects (39% vs 87% or 46% vs 97%, respectively). Our results suggest that a substantial proportion of individuals with symptomatic HIV infection might remain unprotected from influenza, even after immunization with a two-dose regimen.
Record Date Created: 19890823

20/7/8 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13129912 BIOSIS NO.: 200100337061
Insights into a structure-based mechanism of viral membrane fusion.
AUTHOR: LeDuc Danika L; Shin Yeon-Kyun(a)
AUTHOR ADDRESS: (a)Department of Biochemistry and Biophysics, Iowa State University, Ames, IA, 50011: colishin@iastate.edu**USA
JOURNAL: Bioscience Reports 20 (6):p557-570 December, 2000
MEDIUM: print
ISSN: 0144-8463
DOCUMENT TYPE: Literature Review
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT: A number of different viral spike proteins, responsible for membrane fusion, show striking similarities in their core structures. The prospect of developing a general structure-based mechanism seems plausible in light of these newly determined structures. Influenza hemagglutinin (HA) is the best-studied fusion machine, whose action has previously been described by a hypothetical "spring-loaded" model. This model has recently been extended to explain the mechanism of other systems, such as HIV gp120-gp41. However, evidence supporting this idea is insufficient, requiring re-examination of the mechanism of HA-induced membrane fusion. Recent experiments with a shortened construct of HA, which is able to induce lipid mixing, have provided evidence for an alternative scenario for HA-induced membrane fusion and perhaps that of other viral systems.

20/7/9 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12875758 BIOSIS NO.: 200100082907
Induction and modulation of Th1 and Th2 cells with DNA vaccines.
AUTHOR: Daly Lyn M(a); Johnson Patricia A(a); Mills Kingston H G(a)
AUTHOR ADDRESS: (a)Infection and Immunity Group, National University of Ireland Maynooth, Maynooth, Co. Kildare**Ireland
JOURNAL: Immunology 101 (Supplement 1):p33 December, 2000
MEDIUM: print
CONFERENCE/MEETING: Annual Congress of the British Society for Immunology Harrogate, UK December 05-08, 2000
SPONSOR: British Society for Immunology
ISSN: 0019-2805
RECORD TYPE: Citation

LANGUAGE: English
SUMMARY LANGUAGE: English

20/7/10 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

1/2 1st #

12595959 BIOSIS NO.: 200000349461
Influenza virus- induced NF-kappaB-dependent gene expression is mediated by overexpression of viral proteins and involves oxidative radicals and activation of IkappaB kinase.
AUTHOR: Flory Egbert; Kunz Manfred; Scheller Carsten; Jassoy Christian; Stauber Roland; Rapp Ulf R; Ludwig Stephan(a)
AUTHOR ADDRESS: (a)Institut fuer Medizinische Strahlenkunde und Zellforschung (MSZ), Universitaet Wuerzburg, Versbacherstr. 5, D-97078, Wuerzburg**Germany
JOURNAL: Journal of Biological Chemistry 275 (12):p8307-8314 March 24, 2000
MEDIUM: print
ISSN: 0021-9258
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT: Influenza A viruses are capable of inducing the expression of a variety of cytokine and proapoptotic genes in infected cells. The promoter regions of most of these genes harbor binding sites for the transcription factor NF-kappaB which is an important mediator of immune and inflammatory responses. Our present study is based on an observation that influenza A virus infection of cells stimulates transcriptional activation of the HIV -1 long terminal repeat (LTR) which harbors two regulatory NF-kappaB elements, and is aimed at identifying the molecular mechanisms involved in this process. We found that the expression of influenza virus hemagglutinin (HA), matrix protein (M), and nucleoprotein (NP), as single factors is sufficient to transcriptionally activate the HIV -1 LTR. This process is mediated by oxidative radicals because treatment of cells with pyrrolidine dithiocarbamate, a scavenger of such radicals, abolished the transactivating ability. Expression of different influenza proteins induces activation of NF-kappaB-dependent gene expression but not transcriptional activation of an AP-1/Ets-dependent promoter, indicating a selectivity for NF-kappaB transactivation. Furthermore, influenza protein expression induces activation of IkappaB kinase (IKK). Accordingly coexpression of a catalytically inactive mutant of IKK abolishes influenza protein induced activation of NF-kappaB as well as HIV -1 LTR-dependent reporter gene expression, suggesting that IKK is an important intermediate within this signaling process. Taken together, our results show that various influenza virus proteins act as viral transactivators to modulate transcriptional activity of kappaB-element harboring promoters such as the HIV-LTR.

20/7/11 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12202295 BIOSIS NO.: 199900497144
Recombinant vaccinia viruses expressing an immunodominant epitope of HIV-1 envelope protein within an influenza hemagglutinin cassette predominantly prime epitope-specific CD8+ CTL.
AUTHOR: Chiba M(a); Takahashi H; Kato K; Nakagawa Y; Fukushima T; Iinuma H; Nerome K
AUTHOR ADDRESS: (a)Medical Development Department, Nisshin Oil Mills, Ltd., 1-3 Chiwaka-cho, Kanagawa-ku, Yokohama, 221-0036**Japan
JOURNAL: Archives of Virology 144 (8):p1469-1485 1999
ISSN: 0304-8608
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT: We constructed recombinant vaccinia viruses (RVV) expressing a 15-residue peptide (P18IIIB; RIQRGPGRAFVTIGK) of gp160 envelope protein from a human immunodeficiency virus type-1 (HIV -1) IIIB isolate using an H1 influenza virus hemagglutinin (HA) gene cassette. Immunofluorescent tests with antisera against both H1N1 influenza virus and P18IIIB localized chimeric HA molecules comprising influenza virus HA and P18IIIB peptide intracellularly, but the P18IIIB could not be seen on the outer surfaces of infected cells though weak fluorescence was detected regarding HA molecule. Consistent with these findings, Western blotting confirmed the expression of a polypeptide of about 74-kDa protein representing chimeric HA molecule in the infected cells. These recombinants markedly primed CD8+ cytotoxic T lymphocytes (CTL) specific for P18IIIB as well as HA protein of the influenza virus, but failed to elicit P18IIIB-specific antibody despite stimulating production of HA-specific antibody. In addition, the P18IIIB-specific CTL could strongly lyse target cells expressing the whole HIV -1 envelope gene of IIIB strain. Thus, the influenza virus chimeric HA cassette vector system used in the present study appeared to be a useful tool for constructing vaccine candidates which will predominantly prime CD8+ CTL specific for immunodominant determinants of various infectious agents.

20/7/12 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12175818 BIOSIS NO.: 199900470667
Altered virulence of vaccine strains of measles virus after prolonged replication in human tissue.
AUTHOR: Valsamakis Alexandra(a); Auwaerter Paul G; Rima Bert K; Kaneshima Hideto; Griffin Diane E
AUTHOR ADDRESS: (a)Department of Pathology, Johns Hopkins School of Medicine, 600 N. Wolfe St., Baltimore, MD, 21287-7093**USA
JOURNAL: Journal of Virology 73 (10):p8791-8797 Oct., 1999
ISSN: 0022-538X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT: To understand the molecular determinants of measles virus (MV)

virulence, we have used the SCID-hu thymus/liver xenograft model (SCID-hu thy/liv) in which in vivo MV virulence phenotypes are faithfully duplicated. Stromal epithelial and monocytic cells are infected by MV in thymus implants, and virulent strains induce massive thymocyte apoptosis, although thymocytes are not infected. To determine whether passage of an avirulent vaccine strain in human tissue increases virulence, we studied a virus isolated from thymic tissue 90 days after infection with the vaccine strain Moraten (pMor-1) and a virus isolated from an immunodeficient child with progressive vaccine-induced disease (Hu2). These viruses were compared to a minimally passaged wild-type Edmonston strain (Ed-wt) and the vaccine strain Moraten. pMor-1, Hu2, and Ed-wt displayed virulent phenotypes in thymic implants, with high levels of virus being detected by 3 days after infection (105.2, 102.8, and 103.4, respectively) and maximal levels being detected between 7 and 14 days after infection. In contrast, Moraten required over 14 days to grow to detectable levels. pMor-1 produced the highest levels of virus throughout infection, suggesting thymic adaptation of this strain. Similar to other virulent strains, Ed-wt, Hu2, and pMor-1 caused a decrease in the number of viable thymocytes as assessed by trypan blue exclusion and fluorescence-activated cell sorter analysis. Thymic architecture was also disrupted by these strains. Sequence analysis of the hemagglutinin (H) and matrix (M) genes showed no common changes in Hu2 and pMor-1. M sequences were identical in pMor-1 and Mor and varied in H at amino acid 469 (threonine to alanine), a position near the base of propeller 4 in the propeller blade/stem model of H structure. Further study will provide insights into the determinants of virulence.

20/7/13 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

102

11070375 BIOSIS NO.: 199799691520
Development of novel influenza virus vaccines and vectors.
AUTHOR: Palese Peter(a); Zavala Fidel; Muster Thomas; Nussenzweig Ruth S; Garcia-Sastre Adolfo
AUTHOR ADDRESS: (a)Dep. Microbiol., Box 1124, Mt. Sinai Sch. Med., 1 Gustave Levy Pl., New York, NY 10029**USA

102(b)

JOURNAL: Journal of Infectious Diseases 176 (SUPPL. 1):pS45-S49 1997
ISSN: 0022-1899
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Approaches to improve the efficacy of the current (killed) influenza virus vaccines include the generation of cold-adapted and genetically engineered influenza viruses containing specific attenuating mutations. It is hoped that these genetically altered viruses, in which the hemagglutinin and neuraminidase genes from circulating strains have been incorporated by reassortment, can be used as safe live influenza virus vaccines to induce a long-lasting protective immune response in humans. In addition, genetically engineered influenza viruses may provide a means for expressing foreign antigens. Immunization of mice with recombinant influenza and vaccinia viruses expressing specific antigens of Plasmodium yoelii resulted in a dramatic protective immune response against malaria in this model. Mice immunized with recombinant influenza viruses expressing human immunodeficiency virus (HIV) epitopes generated long-lasting HIV-specific serum antibodies and secretory IgA in

the secretory nasal, vaginal, and intestinal mucosa. These results suggest that genetically engineered influenza viruses may be developed for use as live virus vaccines against influenza as well as other diseases.

20/7/14 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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09906593 BIOSIS NO.: 199598361511
Evidence that measles virus hemagglutinin initiates modulation of leukocyte function-associated antigen 1 expression.
AUTHOR: Nagendra Attibele R; Smith C Wayne; Wyde Philip R(a)
AUTHOR ADDRESS: (a)Dep. Microbiol. Immunol., Baylor Coll. Medicine, One Baylor Plaza, Houston, TX 77030**USA
JOURNAL: Journal of Virology 69 (7):p4357-4363 1995
ISSN: 0022-538X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Measles virus (MV), human immunodeficiency virus, Epstein-Barr virus, and other leukotropic viruses can modulate the expression of leukocyte function antigen 1 (LFA-1) on the surface of infected and nearby leukocytes. This ability to induce changes in LFA-1 expression may play an important role in the pathogenesis of these viruses. However, the mechanism(s) involved in virus-mediated regulation of LFA-1 is unknown. Evidence is presented in this report that it is the MV hemagglutinin (H) protein that initiates up-regulation of LFA-1 expression in leukocyte cultures infected with this virus. Indeed, comparison of the abilities of different MV strains to modulate LFA-1 expression, examination of published nucleotide sequences for the H proteins of different vaccine strains, and competitive inhibition assays using oligopeptides homologous or heterologous to a region of the H protein gene encompassing amino acid 116 (from the amino terminus) all suggest that it is this portion of the H protein that is responsible for MV-induced alteration of LFA-1. These comparisons also support the hypothesis that there is a relationship between the abilities of different MV strains to alter LFA-1 expression and their pathogenic potentials.

20/7/15 (Item 8 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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09782071 BIOSIS NO.: 199598236989
Derivatization with monomethoxypolyethylene glycol of Igs expressing viral epitopes obviates adjuvant requirements.
AUTHOR: Brumeanu Teodor-D; Zaghouani Habib; Elahi Ebrahim; Daian Christina; Bona Constantin A(a)
AUTHOR ADDRESS: (a)Mt. Sinai Sch. Medicine, Dep. Microbiol., 1 Gustave L. Levy Place, Box 1124, New York, NY 10029**USA
JOURNAL: Journal of Immunology 154 (7):p3088-3095 1995
ISSN: 0022-1767
DOCUMENT TYPE: Article

RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Ig molecules expressing within the CDR3 loop viral B or T cell epitopes were derivatized with mPEG 5,000. Pegylated Ig were used to investigate the in vitro and in vivo effect of pegylation on the immunogenicity of viral epitopes expressed in chimeric Ig. Two chimeras were used in this study: Ig-HA carrying a CD4 epitope corresponding to amino acid residues 110-120 of the hemagglutinin (HA) of PR8 influenza A virus and Ig-V-3C, a murine-human chimera carrying a consensus B cell epitope from the V-3 loop of HIV -1 gp120 protein. Pegylated Ig-HA (Ig-HA-mPEG) with 6 to 8% substituted lysine residues showed in vivo resistance to enzymatic degradation and persisted significantly in blood circulation and lymphoid organs. Moreover, Ig-HA-mPEG was able to activate in vitro HA110-120-specific hybridoma T cells and to prime T cell proliferative response in vivo without requirement for adjuvant. Also, mildly pegylated Ig-V-3C (Ig-V-3C-mPEG) administered into BALB/c mice in the absence of adjuvant induced specific Ab response to V-3C peptide with insignificant response to xenogeneic human Ig determinants.

20/7/16 (Item 9 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

09594606 BIOSIS NO.: 199598049524
Selective induction of immune responses by cytokines coexpressed in recombinant fowlpox virus.
AUTHOR: Leong Kah Hoo(a); Ramsay Alistair J; Boyle David B; Ramshaw Ian A
AUTHOR ADDRESS: (a)Div. Cell Biol., John Curtin Sch. Med. Res., P.O. Box 334, Canberra, ACT 2601**Australia
JOURNAL: Journal of Virology 68 (12):p8125-8130 1994
ISSN: 0022-538X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Avipoxviruses have recently been studied as potential vectors for the delivery of heterologous vaccine antigen. Because these viruses abortively infect mammalian cells yet still effectively present encoded foreign genes to the host immune system, they offer a safer but effective alternative to other live virus vectors. We have examined the effect of coexpressing the cytokine interleukin-6 or gamma interferon on immune responses to a recombinant fowlpox virus expressing influenza virus hemagglutinin . The encoded cytokine was expressed for prolonged periods in infected cell culture with little cytopathic effect due to the abortive nature of the infection. In mice, vector-expressed cytokine dramatically altered immune responses induced by the coexpressed hemagglutinin antigen. Expression of interleukin-6 augmented both primary systemic and mucosal antibody responses and primed for enhanced recall responses. In contrast, expression of gamma interferon markedly inhibited antibody responses without affecting the generation of cell-mediated immunity. The safety of these constructs was demonstrated in mice with severe combined immunodeficiency , and no side effects due to cytokine expression were observed. In summary, fowlpox virus vectors encoding cytokines represent a safe and effective vaccine strategy which may be used to selectively manipulate the immune response.

20/7/17 (Item 10 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

09305698 BIOSIS NO.: 199497314068
Cross-neutralizing activity against divergent human immunodeficiency virus type 1 isolates induced by the gp41 sequence ELDKWAS.
AUTHOR: Muster Thomas(a); Guinea Rosario; Trkola Alexandra; Purtscher Martin; Klima Annelies; Steindl Franz; Palese Peter; Katinger Hermann
AUTHOR ADDRESS: (a)Inst. fuer Angewandte Mikrobiol., Univ. fuer Bodenkultur, Nussdorfer Lande 11, A-1190 Vienna**Austria
JOURNAL: Journal of Virology 68 (6):p4031-4034 1994
ISSN: 0022-538X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Previously we identified the highly conserved amino acids Glu-Leu-Asp-Lys-Trp-Ala (ELDKWA) on the ectodomain of gp41 as the epitope of a neutralizing monoclonal antibody (2F5) directed against human immunodeficiency virus type 1. In the present study, the sequence defining the epitope was introduced into the loop of antigenic site B of the influenza virus hemagglutinin . The resulting chimeric virus was able to elicit ELDKWA-specific immunoglobulins G and A in antisera of mice. Moreover, the distantly related human immunodeficiency virus type 1 isolates MN, RF, and IIIB were neutralized by these antisera. These data suggest that this conserved B-cell epitope is a promising candidate for inclusion in a vaccine against AIDS. The results also show that influenza virus can be used to effectively present the antigenic structure of this B-cell epitope.

20/7/18 (Item 11 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

08996943 BIOSIS NO.: 199497005313
Chimeric influenza virus induces neutralizing antibodies and cytotoxic T cells against human immunodeficiency virus type 1.
AUTHOR: Li Shengqiang; Polonis Victoria; Isobe Hidecki; Zaghouani Habib; Guinea Rosario; Moran Thomas; Bona Constantin; Palese Peter(a)
AUTHOR ADDRESS: (a)Dep. Microbiol., Mount Sinai Sch. Med., New York, NY 10029**USA
JOURNAL: Journal of Virology 67 (11):p6659-6666 1993
ISSN: 0022-538X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Expression vectors based on DNA or plus-stranded RNA viruses are being developed as vaccine carriers directed against various pathogens. Less is known about the use of negative-stranded RNA viruses, whose genomes have been refractory to direct genetic manipulation. Using a recently described reverse genetics method, we investigated whether influenza virus is able to present antigenic structures from other

infectious agents. We engineered a chimeric influenza virus which expresses a 12-amino-acid peptide derived from the V3 loop of gp120 of human immunodeficiency virus type 1 (HIV -1) MN. This peptide was inserted into the loop of antigenic site B of the influenza A/WSN/33 virus hemagglutinin (HA). The resulting chimeric virus was recognized by specific anti-V3 peptide antibodies and a human anti-gp120 monoclonal antibody in both hemagglutination inhibition and neutralization assays. Mice immunized with the chimeric influenza virus produced anti-HIV antibodies which were able to bind to synthetic V3 peptide, to precipitate gp120, and to neutralize MN virus in human T-cell culture system. In addition, the chimeric virus was also capable of inducing cytotoxic T cells which specifically recognize the HIV sequence. These results suggest that influenza virus can be used as an expression vector for inducing both B- and T-cell-mediated immunity against other infectious agents.

20/7/19 (Item 12 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

08972703 BIOSIS NO.: 199396124204
Receptor-mediated activation of multiple serine/threonine kinases in human leukocytes.
AUTHOR: Grinstein Sergio(a); Furuya Wendy; Butler Jeffrey R; Tseng Jeannie
AUTHOR ADDRESS: (a)Div. Cell Biol., Hosp. Sick Children, 555 University Ave., Toronto M5G 1X8**Canada
JOURNAL: Journal of Biological Chemistry 268 (27):p20223-20231 1993
ISSN: 0021-9258
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Activation of the microbicidal response of phagocytes requires cytosolic ATP and is associated with extensive protein phosphorylation, suggesting the involvement of protein kinases in the signal transduction cascade. An in vitro renaturation assay was used to identify the protein kinase(s) activated by chemoattractants in human blood neutrophils. Four distinct kinases were activated by the chemotactic peptide formyl-methionyl-leucyl-phenylalanine with molecular masses of 72, 65, 49, and 41 kDa (designated PK72, PK65, PK49, and PK41, respectively). PK72 and PK65 were activated very rapidly (5-15 s), yet transiently. By comparison, PK49 and PK41 responded in a slower, more sustained manner. Treatment of extracts of activated cells with alkaline phosphatase reverted the stimulation of the kinases, suggesting that phosphorylation is the post-translational modification that underlies activation of the kinases. Stimulation of PK72 and PK65 by chemoattractant was independent of calcium and protein kinase C. In contrast, elevation of cytosolic free calcium levels was sufficient and appeared to be necessary for full activation of PK49 and PK41. While phorbol esters can mimic the effects of formyl-methionyl-leucyl-phenylalanine on PK49 and PK41, inhibition of protein kinase C by staurosporine did not prevent the receptor-mediated activation of these kinases. PK41 most likely corresponds to the Erk-1 isoform of mitogen-activated protein (MAP) kinase. Accordingly, PK41 effectively phosphorylated myelin basic protein, known to be a good substrate for Erk-1. The electrophoretic mobility of PK49 is similar to

that of MAP kinase-kinase (MAP/Erk kinase). However, immunoprecipitation experiments indicated that PK49 is not MAP/Erk kinase. The identity of this and other kinases remains to be defined, but possible candidates are discussed. In addition to autophosphorylating, PK72, PK65, and PK41 were shown to effectively phosphorylate exogenous substrates. These kinases may therefore play a role in signal transduction during stimulation by chemoattractants.

20/7/20 (Item 13 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

08936211 BIOSIS NO.: 199396087712
Neutralization and infection-enhancement epitopes of influenza A virus hemagglutinin.
AUTHOR: Tamura Manabu; Webster Robert G; Ennis Francis A(a)
AUTHOR ADDRESS: (a)Div. Infectious Dis., Dep. Med., Univ. Mass. Med. Cent., Worcester, MA 01655**USA
JOURNAL: Journal of Immunology 151 (3):p1731-1738 1993
ISSN: 0022-1767
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: We studied 18 mAb specific for the H3 hemagglutinin (HA) to analyze the relationships between neutralizing and infection-enhancing epitopes on the influenza HA. The mAb could be separated into three groups based on their neutralization (N) and enhancement (E) activity in assays with the prototype virus; group I (N+E+), group II (N+E-) and group III (N+-E+). A representative mAb from each group was analyzed for its effect on the infectivity of a group of escape mutants, selected with mAb to three sites on the H3 HA, and wild-type H3 viruses to define the relationship between neutralizing epitopes and infection-enhancing epitopes. A group I mAb (N+E+), which recognized site A on the HA, neutralized virus infection at high concentrations of antibody and enhanced virus infection at low concentrations. A group II mAb (N+E-), which recognized site B, had high neutralizing but no enhancing activity. The failure of this mAb to enhance virus uptake was a result of the inability of the Fc portion of virus-mAb complexes to bind to Fc receptor. The addition of anti-murine IgG as a second antibody to these virus-mAb complexes augmented virus uptake. A group III mAb (N-E+), which recognized site C, had enhancing but little neutralizing activity. This is the first definition of distinct epitopes that induce neutralizing and/or enhancing mAb.

20/7/21 (Item 14 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

08888938 BIOSIS NO.: 199396040439
Envelope protein and p18(IIIB) peptide recognized by cytotoxic T lymphocytes from humans immunized with human immunodeficiency virus envelope.
AUTHOR: Achour Ammar(a); Picard Odile; Mbika Jean-Pierre; Willer Andreas; Snart Ronald; Bizzini Bernard; Carelli Claude; Burny Arsene; Zagury

Daniel
AUTHOR ADDRESS: (a)Lab. Physiol. Cell., Univ. Pierre Marie Cure, 4 Place Jussieu, Tour 32, BP198, 75252 Paris**France
JOURNAL: Vaccine 11 (7):p699-701 1993
ISSN: 0264-410X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Cytotoxic T cells are the main antigen-specific effector cells of the cellular immune system and MHC class I restricted cytotoxic T-lymphocyte (CTL) responses in mice, acting against the HIV -1 envelope protein, are known to be predominantly directed against an amino acid sequence in the third hypervariable domain. We have investigated the epitope specificity of anti-HIV -1 CTL in healthy human volunteers inoculated with a recombinant vaccinia expressing the HIV -1 gp160 envelope gene. Their isolated lymphocytes were stimulated in vitro with autologous HIV -1 infected cells. Our results show that immunization with recombinant virus is able to generate virus-specific CTLs to the HIV -1 gp160 envelope protein and to a 15-residue synthetic peptide corresponding to a highly variable region of the envelope p18(IIIB). The CTL response was restricted by class I MHC molecules HLA-A2 and A3 that commonly occur in the human population.

20/7/22 (Item 15 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

08204106 BIOSIS NO.: 000094016379
HUMAN IMMUNODEFICIENCY VIRUS VECTORS FOR INDUCIBLE EXPRESSION OF FOREIGN GENES
AUTHOR: BUCHSCHACHER G L JR; PANGANIBAN A A T
AUTHOR ADDRESS: MCARDLE LABORATORY CANCER RESEARCH, UNIVERSITY WISCONSIN, 1400 UNIVERSITY AVENUE, MADISON, WIS. 53706.
JOURNAL: J VIROL 66 (5). 1992. 2731-2739. 1992
FULL JOURNAL NAME: Journal of Virology
CODEN: JOVIA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

Take a look only may related ?

ABSTRACT: Tat-dependent expression of an endogenous lethal or deleterious foreign gene might be useful for abrogating the production of human immunodeficiency virus (HIV) from cells. This type of HIV-induced cellular killing, as well as other approaches to gene therapy for HIV infection, would be facilitated by simple HIV vectors that express introduced genes in a Tat-inducible manner. As part of studies to examine the feasibility of this concept, we constructed HIV -1 vectors that express the hygromycin B phosphotransferase gene (Hygr) in a Tat-dependent manner. Comparison of the efficiency of propagation of each vector indicates that sequences extending into the gag open reading frame are necessary in cis for efficient vector propagation. Southern blot analysis of genomic DNA isolated from vector-infected cells demonstrated that the vectors were capable of being propagated as expected without gross rearrangements or deletions. A fragment of the influenza A virus hemagglutinin (H5 HA) gene, capable of eliciting antibody and cytotoxic T-cell responses, was used as a marker for further characterization of

the vector system. A Tat-dependent vector conferring the H5 HA+ phenotype was assayed by indirect immunofluorescence, and cells which contained but did not express the H5 HA gene were isolated. The activation of H5 HA expression following HIV infection of Tat- cells that stably contained but did not express the H5 HA construct was determined to be an efficient process.

20/7/23 (Item 16 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07343952 BIOSIS NO.: 000090123854
INTERACTION OF PEPTIDES CORRESPONDING TO AMINO-TERMINAL FRAGMENTS OF INFLUENZA VIRUS HEMAGGLUTININ LIGHT CHAIN HA-2 AND TRANSMEMBRANE GLYCOPROTEIN GP 41 OF HUMAN IMMUNODEFICIENCY VIRUS HIV- 1 WITH ARTIFICIAL AND NATURAL LIPID MEMBRANES

AUTHOR: SLEPUSHKIN V A; MELIKYAN G B; SIDOROVA M V; KORNILAEVA G V; CHUMAKOV V M; AZ'MUKO A A; ANDREEV S M; KALMANSON A E; KARAMOV E V
AUTHOR ADDRESS: D.I. IVANOVSKII INST. VIROL., ACAD. MED. SCI. USSR, MOSCOW, USSR.

JOURNAL: BIOL MEMBR 7 (3). 1990. 261-273. 1990
FULL JOURNAL NAME: Biologicheskie Membrany
CODEN: BIMEE
RECORD TYPE: Abstract
LANGUAGE: RUSSIAN

ABSTRACT: The interaction of peptides corresponding to N-terminal fragments of influenza virus hemagglutinin light chain (HA2) and transmembrane glycoprotein (gp 41) of human immunodeficiency virus (HIV -1) with artificial membranes has been studied. For this purpose the bilayer lipid membranes (BLM) conductivity increase and the changes in the ESR spectra of spin-labelled liposomes were registered. The interactions of the afore-mentioned peptides with natural cellular membranes were mnonitored via inhibition of syncytium formatin in HIV-infected lymphoblastoid cell culture. Peptide III (residues 522-532 of gp 160 HIV strain BRU), consisting of 11 hydrophobic amino acids was shown to induce at 37.degree. C an abrupt pH-independent BLM conductivity increase with unstable current level. Peptide I (12 amino acid residues), corresponding to N-terminal sequence of influenza virus HA2, causes similar BLM conductivity changes, but only at pH 5.2. Ca2+ ions decrease by about 50% the changes in the BLM conductivity induced by the peptides, but exert no effect on the "chanel" incorporation into membrane. Peptides IV and II (residues 524-538 and 517-538 of gp 160, respectively) elicited the liposome permeability increases, peptide II inducing in addition liposome fusion. These activities were observed at 37.degree. C and pH 7.4 at pH 5.2, only peptide II brought about a slight leakage of spin labels from liposomes. All peptides studied, including peptide V (amino acid residues 527-537 of gp 160) inactive in other tests, inhibited the HIV-induced syncytium formation in cell culture. With the peptide length increase, its concentration necessary for 50% inhibition of syncytium formation, decreased. The most active peptide II, reproducing the N-terminal sequence of gp 41, in concentration of 1 mM lysed the cells. The theoretical and practical significance of the results obtained is discussed.

20/7/24 (Item 17 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06786988 BIOSIS NO.: 000088096425
THE INFLUENCE OF HIV INFECTION ON ANTIBODY RESPONSES TO A TWO-DOSE REGIMEN OF INFLUENZA VACCINE
AUTHOR: MIOTTI P G; NELSON K E; DALLABETTA G A; FARZADEGAN H; MARGOLICK J; CLEMENTS M L
AUTHOR ADDRESS: DEP. EPIDEMIOL., JOHNS HOPKINS UNIV. SCH. HYGIENE AND PUBLIC HEALTH, 615 N. WOLFE ST., BALTIMORE, MD. 21205.
JOURNAL: JAMA (J AM MED ASSOC) 262 (6). 1989. 779-783. 1989
FULL JOURNAL NAME: JAMA (Journal of the American Medical Association)
CODEN: JAMAA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: We studied whether a two-dose regimen of inactivated influenza virus vaccine was more effective than a single dose in inducing protective hemagglutination -inhibition antibody responses in patients infected with human immunodeficiency virus (HIV). Participants included subjects with acquired immunodeficiency syndrome, subjects with acquired immunodeficiency syndrome-related complex, and HIV-seropositive individuals with either lymphadenopathy only or no symptoms. Control subjects were HIV-seronegative heterosexuals and HIV-seronegative homosexuals. Two doses of inactivated influenza vaccine containing 15 .mu.g of the hemagglutinin of influenza A/Taiwan/1/86(H1N1), A/Leningrad/360/86(H3N2), and B/Ann Arbor/1/86 were administered intramuscularly in the deltoid region 1 month apart. The second dose of vaccine did not significantly increase the frequency or magnitude of antibody responses of either HIV-seropositive or HIV-seronegative subjects over that achieved by a single dose. The two-dose regimen induced a protective level (.gtoreq. 1:64) of hemagglutination -inhibition antibody to influenza A(H1N1) or (H3N2) virus less often in subjects with symptomatic HIV infection than in uninfected control subjects (39% vs 87% or 46% vs 97%, respectively). Our results suggest that a substantial proportion of individuals with symptomatic HIV infection might remain unprotected from influenza, even after immunization with a two-dose regimen.

20/7/25 (Item 18 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

02936164 BIOSIS NO.: 000069044282
DEVELOPMENT AND PRELIMINARY TESTING OF AN INACTIVATED EQUINE ADENOVIRUS VACCINE
AUTHOR: LEW A M; SMITH H V; STUDDERT M J
AUTHOR ADDRESS: SCH. VET. SCI., UNIV. MELB., PARKVILLE, VICTORIA 3052, AUST.
JOURNAL: AM J VET RES 40 (12). 1979. 1707-1712. 1979
FULL JOURNAL NAME: American Journal of Veterinary Research
CODEN: AJVRA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Production and testing of an inactivated equine adenovirus (EAdV) vaccine is described. The EAdV was grown in equine fetal kidney cells . Kinetics of viral inactivation , using varied concentration of .beta.-propiolactone (.beta.PL) and varied incubation times, were determined. Kinetics of inactivation of EAdV by UV using varied exposure times were determined. A combined procedure of incubating EAdV for 2 h at 37.degree. C with 0.1% .beta.PL and exposing for 10 min with UV at 188 .mu.W/cm2 was used for vaccine production. The inactivated EAdV vaccine elicited high antibody titers in rabbits, mice and foals. Using nude mice as models of T [thymus-derived] cell immunodeficiency showed that, at least for mice, virus-neutralizing antibody [Ab] and to a lesser extent hemagglutination -inhibition Ab production was thymus-dependent. Foals used for evaluating the vaccine had low EAdV Ab titers before inoculation. These Ab were maternally derived or represented previous active Ab synthesis to EAdV infection. Control foals did not show an increase in Ab titer. High Ab titers produced by the inoculated foals were apparently a consequence of the vaccine and not of an EAdV epizootic that may have occurred during the experimental period. In vitro lymphocyte stimulation tests were conducted, using lymphocytes from 2 foals inoculated with the EAdV vaccine. The assays were conducted with a varied amount of EAdV antigen; lymphocyte-virus mixtures were incubated for 3, 4, 5 and 7 days and lymphocyte samples were collected 3, 6, 10 and 14 days after the second injection of vaccine. There was uniform failure to demonstrate stimulation . In control assays, identical lymphocyte preparations responded typically to phytohemagglutinin stimulation . EAdV along with most naked viruses may not induce measurable lymphocyte stimulation responses in vitro. Other T cell function tests may be more appropriate to determine whether cell-mediated immunity is induced by the inactivated EAdV vaccine.

20/7/26 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

11230076 EMBASE No: 2001244976
The rational design of vaccine adjuvants for mucosal and neonatal immunization

Mahon B.P.
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AUTHOR EMAIL: bpmahon@may.ie
Current Medicinal Chemistry (CURR. MED. CHEM.) (Netherlands) 2001, 8/9 (1057-1075)
CODEN: CMCHE ISSN: 0929-8673
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 228

There is an urgent requirement for neonatal vaccines that induce effective and long-lasting immune responses at the mucosal surfaces of the gut and respiratory tract. The delay in their development has been due in part to a lack of understanding of the mucosal and neonatal immune systems. This work reviews recent advances in the understanding of the cells and molecules that mediate immunity, describing the importance of different T helper populations in determining the success of vaccination strategies. These advances have allowed the rational design of novel vaccine adjuvants

and delivery systems that can selectively induce immunity at different anatomical sites mediated by distinct T cell populations. Five functional classes of adjuvant are described. These exploit mechanisms which a) create an antigen depot, b) preserve antigen conformation, c) direct antigen to specific immune cells, d) induce mucosal responses and e) induce cytotoxic T cell responses. Comparisons are made between the chemical structures of bacterial toxins and non-toxic derivatives that retain adjuvanticity. The concept of DNA immunization is introduced and the advantages and disadvantages of this novel approach are discussed. The specific problems relating to neonatal immunization are explored with particular reference to the functional immaturity of the neonatal immune system and interference by maternal antibody. Finally, recent work suggesting that there is no intrinsic barrier to designing effective neonatal vaccines deliverable by the mucosal route is discussed.

20/7/27 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

135045178 CA: 135(4)45178m PATENT
Induction of immunoglobulin class switching by inactivated viral vaccine
INVENTOR(AUTHOR): Compans, Richard W.; Sha, Zhiyi
LOCATION: USA
ASSIGNEE: Emory University
PATENT: PCT International ; WO 200141798 A1 DATE: 20010614
APPLICATION: WO 2000US33290 (20001208) *US PV169813 (19991208)
PAGES: 43 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: A61K-039/00A; A61K-039/02B; A61K-039/095B; A61K-039/12B; A61K-039/21B; A61K-039/108B; A61K-039/145B; A61K-039/155B; A61K-039/165B; A61K-039/193B; A61K-039/205B; A61K-039/245B; A61K-039/295B; A61K-045/00B DESIGNATED COUNTRIES: AU; CA; JP DESIGNATED REGIONAL: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT ; LU; MC; NL; PT; SE; TR
SECTION:
CA215002 Immunochemistry
IDENTIFIERS: virus vaccine Ig class switching immunodeficiency antibody
DESCRIPTORS:
Recombination,genetic...
Ig class switching; induction of Ig class switching and humoral immunity by immunization with inactivated viral vaccine and sialic acid-binding viruses
Alphavirus... Animal virus... Antibodies... Antigens... Bovine immunodeficiency virus... Chikungunya virus... Dengue virus... Eastern equine encephalitis virus... Feline immunodeficiency virus... Flavivirus... Hemagglutinins... Human herpesvirus... Human immunodeficiency virus... Influenza virus... Japanese encephalitis virus... Kyasanur Forest disease virus... Mayaro virus... Measles virus... Murray Valley encephalitis virus ... Omsk hemorrhagic fever virus... Orthomyxovirus... O'nyong-nyong virus ... Paramyxovirus... Powassan virus... Rabies virus... Rocio virus... Ross River virus... Semliki Forest virus... Sialic acids... Simian immunodeficiency virus... Sindbis virus... St. Louis encephalitis virus... Tick-borne encephalitis virus... Vaccines... Venezuelan equine encephalitis virus... Vesicular stomatitis virus... West Nile virus... Western equine encephalitis virus... Yellow fever virus...
induction of Ig class switching and humoral immunity by immunization with inactivated viral vaccine and sialic acid-binding viruses
AIDS(disease)... Bacteria(Eubacteria)... Capsule(microbial)... CD4-positive

T cell... Escherichia coli... Immunodeficiency... Neisseria meningitidis... Neoplasm...
induction of Ig class switching and humoral immunity by immunization with inactivated viral vaccine and sialic acid-binding viruses in relation to
Antibodies...
neutralizing; induction of Ig class switching and humoral immunity by immunization with inactivated viral vaccine and sialic acid-binding viruses
CAS REGISTRY NUMBERS:
50-00-0 biological studies, induction of Ig class switching and humoral immunity by immunization with inactivated viral vaccine and sialic acid-binding viruses in relation to
57-57-8 9001-67-6 induction of Ig class switching and humoral immunity by immunization with inactivated viral vaccine and sialic acid-binding viruses in relation to

20/7/28 (Item 2 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

129040142 CA: 129(4)40142m PATENT
Immunization of infants
INVENTOR(AUTHOR): Bot, Adrian; Bona, Constantin
LOCATION: USA
ASSIGNEE: Mount Sinai School of Medicine of the City University of New York; Bot, Adrian; Bona, Constantin
PATENT: PCT International ; WO 9822145 A1 DATE: 19980528
APPLICATION: WO 97US21687 (19971121) *US 755034 (19961122)
PAGES: 84 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: A61K-048/00A; C12N-015/09B; C12N-015/79B DESIGNATED COUNTRIES: AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN; CU; CZ; DE; DK; EE; ES; FI; GB; GE; GH; HU; ID; IL; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MD; MG; MK; MN; MW; MX; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; UA; UG; US; UZ; VN; YU; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM
DESIGNATED REGIONAL: GH; KE; LS; MW; SD; SZ; UG; ZW; AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE; BF; BJ; CF; CG; CI; CM; GA; GN; ML; MR; NE; SN; TD; TG
SECTION:
CA215002 Immunochemistry
IDENTIFIERS: nucleic acid antigen vaccine mammal infant
DESCRIPTORS:
Animal virus... Bacteria(Eubacteria)... Epitopes... Haemophilus influenzae ... Hepatitis B virus... Hepatitis virus... Human herpesvirus... Human immunodeficiency virus... Influenza virus... Malaria... Measles virus... Neisseria meningitidis... Protozoa... Respiratory syncytial virus... Rotavirus... Staphylococcus aureus... Streptococcus pneumoniae...
antigen; nucleic acid encoding target antigen as vaccine for immunization of mammalian infants
Immune tolerance...
high-zone; nucleic acid encoding target antigen as vaccine for immunization of mammalian infants
Hemagglutinins... Nucleoproteins...
influenza virus; nucleic acid encoding target antigen as vaccine for immunization of mammalian infants
Antibodies...

maternal; nucleic acid encoding target antigen as vaccine for immunization of mammalian infants
Antigens... Cell-mediated immunity... Cytotoxic T cell... Humoral immunity ... Immunization... Infant... Mammal(Mammalia)... Nucleic acids... Pathogen ... Th2 cell...
nucleic acid encoding target antigen as vaccine for immunization of mammalian infants
CD4-positive T cell...
stimulation; nucleic acid encoding target antigen as vaccine for immunization of mammalian infants

20/7/29 (Item 3 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

128172095 CA: 128(14)172095n PATENT
Chimeric rhinoviruses for immune response stimulation and vaccines
INVENTOR(AUTHOR): Arnold, Edward V.; Arnold, Gail Ferstandig
LOCATION: USA
ASSIGNEE: Rutgers University
PATENT: United States ; US 5714374 A DATE: 19980203
APPLICATION: US 406347 (19950317) *US 582335 (19900912) *US 41790 (19930401) *US 304635 (19940912)
PAGES: 27 pp. Cont.-in-part of U.S. 5,541,100. CODEN: USXXAM LANGUAGE: English CLASS: 435235100; C12N-007/01A; A67K-039/12B
SECTION:
CA263003 Pharmaceuticals
CA203XXX Biochemical Genetics
CA215XXX Immunochemistry
IDENTIFIERS: rhinovirus antigen chimera immunoactivity, influenza rhinovirus chimera immunoreactivity, poliovirus rhinovirus chimera immunoreactivity, HIV rhinovirus chimera immunoreactivity, vaccine chimeric recombinant rhinovirus
DESCRIPTORS:
Human rhinovirus 14... Protein VP1... Protein VP2... Rhinovirus...
chimeric rhinoviruses for immune response stimulation and vaccines
Virus vectors...
human rhinovirus 14 (recombinant); chimeric rhinoviruses for immune response stimulation and vaccines
Hemagglutinins...
human rhinovirus 14 contg. antigenic region from influenza; chimeric rhinoviruses for immune response stimulation and vaccines
Bacteria(Eubacteria)... gp120(env glycoprotein)... gp41(env glycoprotein) ... Immunization... Parasite... Tumors(animal)... Vaccines...
human rhinovirus 14 contg. antigenic region from poliovirus; chimeric rhinoviruses for immune response stimulation and vaccines
Antigens...
NAg-1 (nucleolar antigen 1), human rhinovirus 14 contg. antigenic region from poliovirus; chimeric rhinoviruses for immune response stimulation and vaccines
Human immunodeficiency virus 1... Human immunodeficiency virus 2... Human immunodeficiency virus... Human poliovirus 2... Human poliovirus 3... Influenza virus... Orthomyxovirus... Picornaviridae... Retroviridae...
recombinant with human rhinovirus 14; chimeric rhinoviruses for immune response stimulation and vaccines
CAS REGISTRY NUMBERS:

131474-11-8P human rhinovirus 14 contg. HIV-1 gp120env antigenic region; chimeric rhinoviruses for immune response stimulation and vaccines

20/7/30 (Item 1 from file: 351)
DIALOG(R)File 351:Derwent WPI

013967384
WPI Acc No: 2001-451598/200148
Inducing an immune response in a human e.g. with HIV, comprises administering an immunogenic composition comprising a sialic acid binding component and at least one antigen of a target cell or virus
Patent Assignee: UNIV EMORY (UYEM-N)
Inventor: COMPANS R W; SHA Z
Number of Countries: 022 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200141798	A1	20010614	WO 2000US33290	A	20001208	200148	B
AU 200122561	A	20010618	AU 200122561	A	20001208	200161	

Priority Applications (No Type Date): US 99169813 A 19991208
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200141798	A1	E	43	A61K-039/00	

Designated States (National): AU CA JP
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

AU 200122561	A		A61K-039/00	Based on patent WO 200141798

Abstract (Basic): WO 200141798 A1
NOVELTY - Inducing an immune response in a human or animal comprises administering an immunogenic composition comprising a sialic acid binding component and at least one antigen of a target cell or target virus where a humoral response specific for at least one antigen is produced.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) An immunogenic composition (I) comprising a sialic acid binding component and an inactivated or attenuated target cell or an inactivated or attenuated target virus ;
(2) An immunogenic composition (II) comprising a sialic binding component and at least one antigen of a target cell or target virus.
ACTIVITY - Immunostimulant.
To investigate the potential of inactivated PR8 virus to induce IgG responses in the absence of CD4 T cells, the magnitude of virus-specific IgG responses to intramuscular immunization with inactivated influenza PR8 viruses in normal C57B/6 mice and CD4 T cell deficient mice in a C57B/6 background were evaluated by measuring PR8 specific IgG concentrations by ELISA assay. 14-20 week old mice were used in this experiment. Formalin inactivated influenza virus strain PR8 was found to induce virus specific IgM and IgG antibodies in normal C57B/6 mice. Analysis of the isotype distribution of the virus specific IgG indicated that all four IgG subclasses were induced by the inactivated viruses. In the CD4 + T-cell deficient mice. Furthermore the presence of virus-specific IgG in the CD4 T cell deficient mice, indicating that CD4 + T cell independent

antibody class switching from IgM to IgG took place after the immunization. The magnitude of the responses was on average about 5-fold lower than that observed in the normal C57B/6 mice. These data indicate that IgG, but not IgA, responses can be induced by inactivated virus independent of CD4+ T helper cells.

MECHANISM OF ACTION - IgG-stimulator ; vaccine.

USE - The method and compositions are useful for inducing an immune response especially a humoral response in a human or animal which is deficient in CD4 + T cells (claimed) e.g. HIV sufferers.

ADVANTAGE - The methods and compositions provide for CD4+ T cell independent development of protective immune responses. The generation of protective immunity, especially humoral immunity, in a shorter time than traditional immunogenic compositions in CD normal animals or humans.

pp; 43 DwgNo 0/8

Derwent Class: B04; C06; D16

International Patent Class (Main): A61K-039/00

International Patent Class (Additional): A61K-039/02; A61K-039/095; A61K-039/108; A61K-039/12; A61K-039/145; A61K-039/155; A61K-039/165; A61K-039/193; A61K-039/205; A61K-039/21; A61K-039/245; A61K-039/295; A61K-045/00

20/7/31 (Item 2 from file: 351)

DIALOG(R)File 351:Derwent WPI

013797515

WPI Acc No: 2001-281727/200129

Antagonist and adjuvant activity in vaccine preparation for enhancing immune response comprises a lipopolysaccharide isolated from a gram negative bacterium defective in at least msbB or htrB or their analog or derivative

Patent Assignee: UNIV MARYLAND BIOTECHNOLOGY INST (UYMA-N)

Inventor: CROWLEY R; HONE D; SHATA M

Number of Countries: 091 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200125254	A2	20010412	WO 2000US27402	A	20001004	200129	B
AU 200114311	A	20010510	AU 200114311	A	20001004	200143	

Priority Applications (No Type Date): US 2000192650 A 20000327; US 99157635 A 19991004

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200125254	A2	E	77	C07K-000/00	

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

AU 200114311 A C07K-000/00 Based on patent WO 200125254

Abstract (Basic): WO 200125254 A2

NOVELTY - A vaccine preparation, (I), comprising a substantially pure lipopolysaccharide (LPS) antagonist isolated from a gram negative

bacterium that is defective in at least one of the msbB or htrB genes or an analog or derivative of the msbB or htrB genes and a vaccine antigen which is not isolated from the gram negative bacterium is new.

DETAILED DESCRIPTION - The vaccine preparation where the LPS antagonist has reduced pyrogenicity relative to an LPS antagonist isolated from the wild type bacterium.

INDEPENDENT CLAIMS are included for:

(1) the preparation of (I);

(2) the induction of an immune response in a subject comprising the administration of (I) to induce an immune response against the vaccine antigen in the subject; and

(3) a kit for inducing an immune reaction against an antigen in a subject, comprising (I) and a vaccine antigen, which is not isolated from the gram negative bacterium.

ACTIVITY - Cytostatic; antiviral; antifungal; antiparasitic; immunosuppressive.

Each vaccine preparation contained 50 mg of the vaccine peptide (Hep-Tat), which corresponds to the heparin binding domain of the HIV -1 regulatory protein Tat, comprising the sequence (GLGIS YGRKKRRQR). The peptide antigen was prepared synthetically as a Multiple Antigen Peptide (MAPS; Genosys). The preparations comprised 50 mg of Hep-Tat and a range of LPS antagonist doses (from 1 mg to 10 mg). The LPS antagonist was isolated from MLK986 cultured at 37 degreesC. Three groups of BAL Blc mice were injected intraperitoneally with a single 50 microgram dose of a preparation. Control groups were injected with 50 microgram of LPS antagonist formulated with alum as an adjuvant. The immunogenicity of each formulation was measured by taking venous blood from the mice in each group before vaccination (A) and 14 days after vaccination (B), and serum prepared. A second 50 microgram vaccination was applied to the appropriate cohort at 21 days and blood collected 7 days later (C). The level of Hep Tat specific IgG was ascertained by ELISA. The dilutions needed to achieve 50 % saturation of the plates are presented: control: (A) less than 10 (B) less than 10 (C) less than 10; 50 microgram Hep-Tat + 1 microgram LPS antagonist: (A) less than 10 (B) 20 (C) 300; 50 microgram Hep-Tat + 3 microgram LPS antagonist: (A) less than 10 (B) 30 (C) 3000; 50 microgram Hep-Tat + 10 microgram LPS antagonist (A) less than 10 (B) 30 (C) 3000; 50 microgram Hep-Tat only: (A) less than 10 (B) less than 10 (C) less than 10.

MECHANISM OF ACTION - Vaccine.

USE - A vaccine adjuvant comprising a LPS antagonist isolated from a gram negative bacterial strain is useful for increasing the immune response to a vaccine. Where the viral antigen is selected from the following group: orthomyxoviruses , retroviruses, herpesviruses, lentiviruses, rhabdoviruses, picornoviruses, poxviruses, rotaviruses and parvoviruses, preferably from influenza virus, RSV, EBV, CMV, herpes simplex virus, human immunodeficiency virus, rabies, poliovirus and vaccinia and preferably from a group consisting of human immuno deficiency virus antigens Nef, p24, gp120, gp41, Tat, Rev and Pol, T cell and B cell epitopes of gp120, the hepatitis B surface antigen, rotavirus antigens VP4 and VP7, influenza virus antigens hemagglutinin or nucleoprotein and herpes simplex virus thymidine kinase. The bacterial pathogen is selected from a group consisting of Mycobacterium spp., Helibacter pylori, Salmonella spp.,Shigella spp., E. coli , Rickettsia spp., Listeria spp., Legionella pneumoniae, Pseudomonas spp., Vibrio spp. and Borellia burgdorferi, preferably the capsular polysaccharide of Neisseria meningitis, the Vi polysaccharide of Salmonella enterica typhi, Shigella sonnei form 1

antigen, the O antigen of V. cholerae Inaba strain 569, the cholera toxin or TCP of V. cholerae, CFA/I fimbrial antigen of enterotoxigenic or the heat labile toxin of E. coli , pertactin or adenylate cyclase-hemolysin of Bordetella pertussis and fragment C of tetanus toxin of Clostridium tetani.

The vaccine antigen is derived from a parasitic pathogen selected from the group consisting of Plasmodium spp., Trypanosome spp., Giardia spp. , Boophilus spp., Babesia spp., Entamoeba spp. , Eimeria spp., Leishmania spp., Schistome spp. Brugia spp., Fascida spp., Dirofilaria spp., Wucheria spp. Onchocerea spp., preferably from the group consisting of the circumsporozoite antigen of P. berghei and P. falciparum, the merozoite surface antigen of Plasmodium spp. the galactose specific lectin of Entamoeba histolytica, gp63 of Leishmania spp., paramyosin of Brugia malayi, the triose phosphate isomerase of Schistosoma mansoni, the secreted globin like protein of Trichostrongylus colubriformis the glutathione-S transferase of Fraciola hepatica, Schistosoma bovis and S. japonicum and KLH of Shistosoma bovi and another not given in the specification. (I) where the antigen elicits an immune reaction against a tumor antigen, preferably selected from prostate specific antigen, TAG-72, carcinoembrionic antigen (CEA), MAGE 1, tyrosinase and mutant p53 antigen. (I) where the antigen elicits an immune reaction against the CD3 receptor T cells or against an autoimmune antigen preferably IAS beta chain. (I) where the antigen elicits an immune reaction against an immuno stimulatory molecule selected from the group consisting of M-CSF, GM-CSF, IL-4, IL-5, IL-6, IL-10, IL-12 and IFN-gamma. Diseases and disorders that can be treated include viral, fungal and parasitic, infections, cancers and autoimmune diseases in fowl and all mammals, preferably humans.

ADVANTAGE - The invention provides LPS, lipid A or their derivatives which are effective as adjuvants or antagonists and lack pyrogenic activity.

pp; 77 DwgNo 0/3

Derwent Class: B04; C06; D16

International Patent Class (Main): C07K-000/00

20/7/32 (Item 3 from file: 351)

DIALOG(R)File 351:Derwent WPI

013587052

WPI Acc No: 2001-071259/200108

DNA vaccine containing plasmid and cationic lipid containing quaternary ammonium salt, useful for protecting pets and sports animals against, e.g. herpes virus

Patent Assignee: MERIAL (MERI-N); MERIAL SAS (MERI-N)

Inventor: AUDONNET J C F; BARZU LE ROUX S; FISCHER L J C; AUDONNET J F; BARZU-LE ROUX S; FISCHER L J

Number of Countries: 092 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200077043	A2	20001221	WO 2000FR1592	A	20000608	200108	B
FR 2794648	A1	20001215	FR 997604	A	19990610	200108	
AU 200055405	A	20010102	AU 200055405	A	20000608	200121	

Priority Applications (No Type Date): US 99144490 A 19990719; FR 997604 A

19990610
Patent Details:
Patent No Kind Lan Pg Main IPC Filing Notes
WO 200077043 A2 F 109 C07K-014/13
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW
FR 2794648 A1 A61K-048/00
AU 200055405 A C07K-014/13 Based on patent WO 200077043

Abstract (Basic): WO 200077043 A2

NOVELTY - DNA vaccine (A) against pathogens that affect pets and sports animals comprises a plasmid containing a sequence (I), expressible in vivo, that encodes an immunogen from the relevant pathogen and a cationic lipid (II) containing a quaternary ammonium salt, particularly DMRIE (N-(2-hydroxyethyl)-N,N-dimethyl-2,3-bis(tetradecyloxy)-1-propanammoniu m).

DETAILED DESCRIPTION - (II) have formula R1-O-CH2-CH(OR1)-CH2-N+(Me)2-R2-X

R1=12-18C linear aliphatic group, saturated or unsaturated;

R2=2-3C aliphatic group; and

X=hydroxy or amino

An INDEPENDENT CLAIM is also included for a multivalent vaccine (A') containing (A) plus a classical inactivated, live but attenuated, subunit or recombinant vaccine.

ACTIVITY - Antibacterial; antiviral.

MECHANISM OF ACTION - Induction of a specific immune response.

USE - (A), which may be multivalent, are particularly used to protect dogs, cats and horses against bacterial and viral diseases, particularly those caused by the Paramyxoviridae .

ADVANTAGE - Formulation with (II) provides a better immune response and thus more efficient protection, particularly when administered subcutaneously. Response may be further improved by optimization of (I) and/or simultaneous administration (or expression) of granulocyte-macrophage colony-stimulating factor.

pp; 109 DwgNo 0/28

Derwent Class: B04; C06; D16
International Patent Class (Main): A61K-048/00; C07K-014/13
International Patent Class (Additional): A61K-039/12; A61P-037/04

20/7/33 (Item 4 from file: 351)
DIALOG(R)File 351:Derwent WPI

013422632
WPI Acc No: 2000-594575/200056
Nucleic acid molecule encoding a human tumor necrosis factor receptor, known as TR9, useful for treating, preventing and diagnosing severe combined immunodeficiency, autoimmune diseases, HIV infection, epilepsy and cancer
Patent Assignee: HUMAN GENOME SCI INC (HUMA-N)
Inventor: FAN P; GENTZ R L; NI J; YU G

Number of Countries: 090 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200056862	A1	20000928	WO 2000US6831	A	20000316	200056	B
AU 200036288	A	20001009	AU 200036288	A	20000316	200103	

Priority Applications (No Type Date): US 99134220 A 19990514; US 99126019 A 19990324
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200056862	A1	E	218	C12N-005/10	

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

AU 200036288	A		C12N-005/10	Based on patent WO 200056862

Abstract (Basic): WO 200056862 A1

NOVELTY - Isolated nucleic acid molecule (N1) encoding a human tumor necrosis factor receptor, known as TR9 (also known as Death Domain Containing Receptor 6), is new.

DETAILED DESCRIPTION - Isolated nucleic acid molecule (N1) encoding a human tumor necrosis factor receptor, known as TR9 (also known as Death Domain Containing Receptor 6), is new.

N1 is at least 95 % identical to a sequence selected from:

(a) a nucleotide sequence encoding a polypeptide comprising amino acid residues -40 to 615, -39 to 615, or 1 to 615 of the 655 amino acid sequence (I) defined in the specification (numbering of the residues begins from -40 and ends at 615);

(b) a nucleotide sequence encoding a polypeptide, preferably the mature TR9 polypeptide, having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209037;

(c) a nucleotide sequence encoding the TR9 extracellular domain, transmembrane domain, intracellular domain, death domain, or the extracellular and intracellular domains with all or part of the transmembrane domain deleted; or

(d) a nucleotide sequence complementary to any of the nucleotide sequences of (a) to (c).

INDEPENDENT CLAIMS are also included for the following:

(1) an isolated nucleic acid (N2) comprising a sequence which hybridizes under stringent hybridization conditions to N1, where the polynucleotide does not hybridize under stringent hybridization conditions to a nucleotide sequence consisting of only A or T residues;

(2) an isolated nucleic acid (N3) comprising a sequence which encodes the amino acid sequence of an epitope-bearing portion of a TR9 receptor;

(3) an isolated nucleic acid (N4) comprising a sequence which is at least 95% identical to a sequence selected from:

(a) the nucleotide sequence of clone HIBEJ86R (a 365 nucleotide sequence defined in the specification);

(b) the nucleotide sequence of clone HL1AA79R (a 378 nucleotide sequence defined in the specification);

(c) the nucleotide sequence of clone HHFGD57R (a 345 nucleotide sequence defined in the specification);

(d) the nucleotide sequence of clone HSABG38R (a 316 nucleotide

sequence defined in the specification);

(e) the nucleotide sequence of clone HHPDZ31R (a 489 nucleotide sequence defined in the specification);

(f) the nucleotide sequence of a portion of the 3474 nucleotide sequence (II) defined in the specification, where the portion comprises at least 50 contiguous nucleotides from nucleotides 500 to 980; or

(g) a nucleotide sequence complementary to any of the nucleotide sequences of (a) to (f);

(4) a method for making a recombinant vector comprising inserting N1 into a vector;

(5) a recombinant vector produced by the method of (4);

(6) a method of making a recombinant host cell comprising introducing the recombinant vector of (5) into a host cell;

(7) a recombinant host cell produced by the method of (6);

(8) a recombinant method for producing a TR9 polypeptide, comprising culturing the recombinant host cell of (7);

(9) an isolated TR9 polypeptide having an amino acid sequence at least 95% identical to a sequence selected from:

(a) amino acid residues -40 to 615, -39 to 615, 1 to 615 of (I) (numbering of the residues begins from -40 and ends at 615);

(b) the amino acid sequence of the TR9 polypeptide, preferably mature TR9 polypeptide, having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 209037;

(c) the amino acid sequence of the TR9 extracellular domain, transmembrane domain, intracellular domain, death domain, or the extracellular and intracellular domains with all or part of the transmembrane domain deleted; or

(d) the amino acid sequence of an epitope-bearing portion of any one of the sequences of (a) to (c);

(10) an isolated polypeptide comprising an epitope-bearing portion of the TR9 receptor protein, where the portion is selected from residues 4-81, 116-271, 283-308, 336-372, 393-434, 445-559 or 571-588 of (I);

(11) an isolated antibody that binds specifically to a TR9 receptor polypeptide of (9);

(12) an isolated nucleic acid molecule encoding a TR9 receptor polypeptide comprising at least one conservative amino acid substitution, where the nucleic acid sequence is selected from the sequences (a) to (d) described for N1; and

(13) an isolated TR9 receptor polypeptide where, except for at least one conservative amino acid substitution, the polypeptide has a sequence selected from the sequences (a) to (d) described for the TR9 polypeptide of (9).

ACTIVITY - Immunosuppressive; antiinflammatory; cardiant; antiasthmatic; antidiabetic; antiallergic; antiathritic; antirheumatic; anti-HIV; anticonvulsant; cytostatic; neuroprotective.

MECHANISM OF ACTION - Human tumor necrosis factor receptor; gene therapy.

No biological data given.

USE - The TR9 polypeptides, polynucleotides or agonists are useful for treating, preventing or diagnosing common variable immunodeficiency , X-linked agammaglobulinemia, severe combined immunodeficiency and Wiskott-Aldrich syndrome, autoimmune diseases (such as rheumatoid arthritis, allergic encephalomyelitis, multiple sclerosis, diabetes mellitus and asthma), HIV infection, epilepsy, cancer, cardiovascular diseases and other neurological diseases.

Numerous disorders that can be treated by these molecules are

listed in the specification.
pp; 218 DwgNo 0/6
Derwent Class: B04; D16
International Patent Class (Main): C12N-005/10
International Patent Class (Additional): C07K-014/47; C07K-014/705; C07K-014/71; C07K-014/715; C07K-016/24; C12N-015/12; C12N-015/63; C12N-015/64

20/7/34 (Item 5 from file: 351)
DIALOG(R)File 351:Derwent WPI

013333264
WPI Acc No: 2000-505203/200045
New isolated nucleic acid encoding a human T cell surface protein and the soluble surface T4 glycoprotein that it encodes, useful as prophylaxis for treating a subject infected with human acquired immune deficiency syndrome virus
Patent Assignee: UNIV COLUMBIA NEW YORK (UYCO)
Inventor: AXEL R; CHESS L; LITTMAN D R; MADDON P J; MCDOUGAL J S; WEISS R
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6093539	A	20000725	US 86898587	A	19860821	200045 B
			US 91713564	A	19910611	
			US 92909021	A	19920706	
			US 94354452	A	19941212	
			US 95466368	A	19950606	

Priority Applications (No Type Date): US 92909021 A 19920706; US 86898587 A 19860821; US 91713564 A 19910611; US 94354452 A 19941212; US 95466368 A 19950606
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6093539	A		69	C12Q-001/68	Cont of application US 86898587
					CIP of application US 91713564
					Cont of application US 92909021
					Cont of application US 94354452
					Cont of patent US 5958678

Abstract (Basic): US 6093539 A
NOVELTY - An isolated single-stranded nucleic acid (I), encoding an aqueous-soluble polypeptide (II) comprising a portion of a human T4 glycoprotein, is new. The portion specifically forms a complex with a human immunodeficiency virus (HIV) envelope glycoprotein.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a nucleic acid complementary to (I);
(2) a vector comprising (I);
(3) a host vector system comprising a host cell and the vector;
(4) a method for producing (II) comprising growing the host vector system to produce the aqueous-soluble polypeptide and recovering the aqueous-soluble polypeptide;
(5) a nucleic acid comprising a portion of the genomic DNA represented by the restriction enzyme (nuclease) map of the T4 gene in human chromosomal DNA and encoding (II);

(6) a nucleic acid comprising nucleotides corresponding to a portion of a fully defined 1742 bp sequence (given in the specification), and encoding (II); and

(7) a method for detecting a single stranded nucleic acid encoding an amino acid sequence, which is a portion of a T4 glycoprotein, comprising:

(1) contacting (I) to permit hybridization of complementary single-stranded nucleic acid; and

(2) separating the hybridized nucleic acid.

ACTIVITY - Anti-human immunodeficiency virus (anti-HIV).

MECHANISM OF ACTION - AIDS virus antagonist; HIV inhibitor; T4+ cell infection blocker. The ability of soluble T4 glycoprotein to inhibit the infection of T4+ cells by HIV was studied. Phytohemagglutinin -stimulated human lymphocytes were exposed to serial ten-fold dilutions of an HIV inoculum in the presence or absence of soluble T4, washed, and plated in microculture. The frequency of infected cultures was determined using an immunoassay 4.8 and 12 days after exposure to virus. In this manner, the infectious virus titer, ID50 was defined as the reciprocal of the dilution required to infect 50% of the exposed cell cultures at day 12. In the absence of soluble T4, the ID50 observed with the viral inoculum was approximately 105. However, in the presence of 8 microg/ml purified soluble T4, the infection was diminished by almost 4 logs to an ID50 of 101.5. This dramatic reduction in infectivity by HIV was observed throughout the entire course of infection. Cultures exposed to soluble T4 18 hours after infection showed only a 1 log inhibition in the ID50, which resulted from inhibition of virus spread following the initial inoculation. Thus, the 4 log reduction in virus infectivity observed when virus was preincubated with soluble T4 resulted from the specific association of soluble T4 with gp120 on the surface of the virus. These viruses were therefore no longer capable of interacting with the T4 receptor on the cell surface. The ability of soluble T4 to bind gp120 and inhibit viral infection in vitro indicated that soluble T4 was an effective anti-viral agent for treating AIDS.

USE - The DNA is useful for producing the soluble surface T4 glycoprotein (claimed). The soluble surface T4 glycoprotein is useful as a therapeutic agent, i.e. as prophylaxis for treating a subject infected with an HIV virus. Thus, the soluble T4 glycoprotein is useful for treating human acquired immune deficiency syndrome (AIDS). The soluble T4 glycoprotein is also useful in diagnostic or screening assays, e.g. for screening inhibitors of virus binding, or for detecting and quantitating T4, T4+ cells and antibodies to T4, which are of diagnostic value for AIDS.

pp; 69 DwgNo 0/18

Derwent Class: B04; D16

International Patent Class (Main): C12Q-001/68

International Patent Class (Additional): C12N-005/10; C12N-015/12; C12N-015/63

20/7/35 (Item 6 from file: 351)

DIALOG(R)File 351:Derwent WPI

012999298

WPI Acc No: 2000-171150/200015

New recombinant raccoonpox virus containing foreign DNA inserted into a

non-essential region within the HindIII U genomic region, useful as a vaccine against pathogens in mammalian and avian species

Patent Assignee: SCHERING-PLOUGH LTD (SCHE); SCHERING-PLOUGH VETERINARY CORP (SCHE)
Inventor: COCHRAN M D; JUNKER D E

Number of Countries: 086 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200003030	A2	20000120	WO 99US15565	A	19990709	200015	B
AU 9948692	A	20000201	AU 9948692	A	19990709	200028	
US 6294176	B1	20010925	US 98113750	A	19980710	200158	

Priority Applications (No Type Date): US 98113750 A 19980710
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200003030	A2	E	164	C12N-015/86	

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

AU 9948692	A	C12N-015/86	Based on patent WO 200003030
US 6294176	B1	A61K-039/12	

Abstract (Basic): WO 200003030 A2

NOVELTY - A recombinant raccoonpox virus comprising a raccoonpox virus viral genome which contains a foreign DNA sequence inserted into a non-essential region within the HindIII 'U' genomic region of the raccoonpox virus genome is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) host cells (optionally mammalian) infected with the virus;

(2) further recombinant raccoonpox viruses comprising a raccoonpox virus viral genome containing as follows:

(a) a foreign virus viral genome which contains a foreign DNA sequence inserted into a non-essential region (e.g. an EcoRI or SnaBI restriction endonuclease site) within the HindIII 'N' genomic region of the raccoonpox virus genome;

(b) a foreign DNA sequence inserted into a non-essential region (e.g. an HpaI restriction endonuclease site) within the HindIII 'M' genomic region of the raccoonpox virus genome; and

(c) a deletion in a raccoonpox virus host range gene of the viral genome selected from C1L-C7L, N1L, N2L, M1L, M2L and K1L, and optionally comprising a foreign DNA sequence inserted into a non-essential region within the raccoonpox virus genome;

(3) a recombinant swinepox virus comprising a swinepox virus genome containing a foreign DNA sequence which is the host range raccoonpox virus gene K1L or C7L (and optionally a second foreign DNA sequence) inserted into non-essential region(s) of the swinepox virus genome; and

(4) double-stranded homology vectors for producing recombinant raccoonpox virus comprising:

(a) a foreign DNA sequence encoding an antigenic polypeptide derived from an animal pathogen;

(b) at one end of the foreign DNA, feline virus genomic DNA homologous to the genomic DNA located at one side of a non-essential site of the raccoonpox viral genome; and

(c) at the other end of the foreign DNA, raccoonpox virus genomic DNA homologous to the genomic DNA located at the other side of the same site.

USE - The recombinant raccoonpox virus can be included with a carrier in vaccines against animal pathogens (claimed), useful to immunize animals (especially avian species or mammals, including humans) against animal pathogens (claimed), e.g. feline pathogens (claimed) or human pathogens such as hepatitis B virus, human immunodeficiency virus, human influenza etc.

pp; 164 DwgNo 0/0

Derwent Class: B04; C06; D16

International Patent Class (Main): A61K-039/12; C12N-015/86

International Patent Class (Additional): A61K-039/275; A61K-048/00; C12N-005/10; C12N-015/00

20/7/36 (Item 7 from file: 351)

DIALOG(R)File 351:Derwent WPI

012988788 **Image available**

WPI Acc No: 2000-160641/200014

Use of immunoactive agents in manufacture of medicaments for use in particulate delivery systems

Patent Assignee: ALLIANCE PHARM CORP (ALLI-N)

Inventor: BOT A I; DELLAMARY L A; KABALNOV A; SCHUTT E G; TARARA T E; WEERS J G

Number of Countries: 087 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200000215	A1	20000106	WO 99US6855	A	19990331	200014	B
AU 9935469	A	20000117	AU 9935469	A	19990331	200026	
			WO 99US6855	A	19990331		
EP 1091755	A1	20010418	EP 99917320	A	19990331	200123	
			WO 99US6855	A	19990331		

Priority Applications (No Type Date): US 98219736 A 19981222; US 98106932 A 19980629; US 98133848 A 19980814; WO 98US20602 A 19980929; WO 98US20603 A 19980929; WO 98US20613 A 19980929; WO 98US20615 A 19980929; US 98218209 A 19981222; US 98218212 A 19981222; US 98218213 A 19981222

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200000215	A1	E	89	A61K-039/00	

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW

AU 9935469	A		A61K-039/00	Based on patent WO 200000215
EP 1091755	A1	E	A61K-039/00	Based on patent WO 200000215

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

Abstract (Basic): WO 200000215 A1

NOVELTY - Use of immunoactive agents in the production of medicines comprising particles associated with at least 1 immunoactive agent, is

new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) system for administration of bioactive agent to a subject comprising an administration apparatus with a powder containing reservoir, where the powder comprises particles associated with bioactive agents;

(2) a composition comprising perforated microstructures with a bulk density of less than 0.5 g/cm3, that are associated with immunoactive agents; and

(3) use of bioactive agents in the production of medicines comprising particles associated with at least 1 immunoactive agent.

ACTIVITY - Immunomodulatory; antibacterial; antiviral; amebicide; protozoacide; fungicide.

MECHANISM OF ACTION - Vaccine; gene therapy.

USE - The compounds produced using the immuno- or bioactive agents are used to modulate the immune system, e.g. by eliciting an immune response to foreign antigens or pathogenic particles, inducing localized or systemic passive immunity, stimulating immune response or down-regulating immune reaction (claimed). The compositions are used in inhaled vaccines (claimed) comprising target antigens such as hemagglutinin , nucleoprotein, M protein, F protein, HBS protein, gp120 protein of HIV, nef protein of HIV or listertiolysine in influenza virus, cytomegalovirus, herpes virus (HSV-1 and 2), vaccinia virus, hepatitis virus (including hepatitis A, B, C, D), varicella virus, rotavirus, papilloma virus, measles virus, Epstein-Barr virus, coxsackie virus, polio virus, enterovirus, adenovirus, retrovirus (including HIV -1 and -2), respiratory syncytial virus, rubella virus, streptococci (e.g. S. pneumoniae), staphylococci (e.g. S. aureus), Hemophilus (e.g. H. influenzae), Listeria (e.g. L. monocytogenes), Klebsiella, Gram-negative bacilli, Escherichia (e.g. E. coli), Salmonella (e.g. S. typhimurium), Vibrio (e.g. V. cholerae), Yersinia (e.g. Y. pestis or Y. enterocoliticus), Enterococci, Neisseria (e.g. N. meningitidis), Corynebacterium (e.g. C. diphtheriae), Clostridium (e.g. C. tetani), Mycoplasma (e.g. M. tuberculosis), Candida, Aspergillus, Mucor, toxoplasma, amoeba, malarial parasites, trypanosomal parasites, leishmanial parasites and helminths. The compositions may also be used to establish passive and active immunity via inhalational therapies and for hormonal regulation or gene therapy.

ADVANTAGE - The compounds produced are stable and do not require freezing or refrigeration to maintain activity. The compounds also show reduced throat deposition.

DESCRIPTION OF DRAWING(S) - The diagram shows systemic antibody responses to IgG administered intratracheally.

pp; 89 DwgNo 1/15

Derwent Class: B04; B07; D16

International Patent Class (Main): A61K-039/00

International Patent Class (Additional): A61K-009/00; A61K-009/16; A61K-009/51; A61K-009/72

20/7/37 (Item 8 from file: 351)

012964805

WPI Acc No: 2000-136656/200012
Mucosal administration of substance e.g. vaccine by contacting mucosal surface with substance in combination with optionally coated natural polymer core e.g. crosslinked polysaccharide
Patent Assignee: BIOVECTOR THERAPEUTICS SA (BIOV-N)
Inventor: BETBEDER D; DE MIGUEL I; ETIENNE A; KRAVTZOFF R; MAJOR M
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6017513	A	20000125	US 96774920	A	19961227	200012	B
			US 97987436	A	19971209		

Priority Applications (No Type Date): US 97987436 A 19971209; US 96774920 A 19961227
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6017513	A		27	A61K-051/00	CIP of application US 96774920

Abstract (Basic): US 6017513 A

NOVELTY - Mucosal administration of substances to mammals comprises contacting a mucosal surface with the substance in combination with Biovector core comprising natural polymer and/or its hydrolysate that is uncoated or partially or completely coated with no more than one layer comprising lipid compound covalently bonded to the core or an amphiphilic compound.

ACTIVITY - Drug delivery.

The delivery system is used for mucosal administration of substances to mammals (claimed) including therapeutic or prophylactic agents (radiopharmaceutical, analgesic, anesthetic, anorectic, anti-anemic, anti-asthmatic, anti-diabetic, antihistamine, anti-inflammatory, antibiotics, antimuscarinic, antineoplastic, antiviral, cardiovascular drug, CNS depressant, CNS stimulator , antidepressant, anti-epileptic, anxiolytic, hypnotic, sedative, anti-psychotic, beta blocker, hemostatic, hormone, vasodilator, vasoconstrictor, vitamin, vaccines against pathogens including bacteria, viruses, yeasts or fungi, specifically influenza virus (preferred), cytomegalovirus, human immunodeficiency virus, papilloma virus, respiratory syncytial virus, poliomyelitis virus, pox virus, measles virus, arbor virus, Coxsackie virus, herpes virus, hantavirus, hepatitis virus, Lyme disease virus, mumps virus or rotavirus, Neisseria , Aerobacter, Pseudomonas, Porphyromonas, Salmonella, Escherichia, Pasteurella, Shigella, Bacillus, Helibacter (sic), Corynebacterium, Clostridium, Mycobacterium, Yersinia, Staphylococcus, Bordetella, Brucella, Vibrio or Streptococcus, Plasmodium, Schisostoma or Candida, diagnostic agents such as contrast or imaging agent e.g. that detect corneal irregularities or those labeled with detectable groups (radioactive, magnetic or fluorescent), small chemical molecules (organic, inorganic or organo-metallic molecules) or biological molecules (amino acid, oligopeptide, peptide, protein, glycoprotein, lipoprotein, proteoglycan, lipopolysaccharide, fatty acid, eicosanoid, lipid, triglyceride, phospholipid, glycolipid, nucleoside, nucleotide, nucleic acid, DNA molecule, RNA molecule, monosaccharide, oligosaccharide or polysaccharide) (claimed) as well as cytokines, growth factors, enzymes, antigens (including epitopes of antigens and haptens), antibodies, hormones, (natural and synthetic hormones and their derivatives), co-factors, receptors, enkephalins, endorphins, neurotransmitter s and nutrients such as insulin, interferon (alpha-,

beta- or gamma-IFN), interleukins (IL-1 to IL-15), interleukin receptors (IL-1 receptor), calcitonin, erythropoeitin, thrombopoietin, epidermal growth factor and insulin-like growth factor-1. It can also be used to detect irregularities within the respiratory tract, digestive tract, auditory canal, urethra, rectum or any part of mammal with mucosal membrane and to deliver contrast agents for magnetic resonance imaging.

Influenza hemagglutinin (HA) was delivered by Biovectors to female mice, with 5 mug HA applied intranasally in 20 or 50 mul of phosphate-buffered saline solution or suspension, either alone or in Biovector formulation. One group of animals was subjected to light ether anesthesia, while the others were awake. Administration of 20 mul on the outer nostrils of awake animals restricted the antigen to the upper respiratory tract. Volume of 50 mul directly into the nostrils of anesthetized animals resulted in deposition of at least some antigen in the lower respiratory tract and lung as well as in the nasal cavity. Four different Biovectors were used: (Q) positive and (P) negatively charged light Biovectors either re-suspended - (1Q) and (1P) - or dispersed (2Q) and (2P). Influenza virus subunit antigen was either pre-loaded in the Biovectors or post-loaded (admixed immediately prior to administration). Antigen alone was used as control (3). Mice were sacrificed at day 28 and serum samples from the vena porta analyzed by direct enzyme-linked immunosorbent assay (ELISA). Serum immunoglobulin G titers (geometric mean) determined as reciprocal of sample dilution corresponding to absorbance at 492 nm of 0.2 above background were as follows in unanesthetized animals: (1Q) pre-loaded=10, post-loaded=20; (1P) pre-loaded=400, post-loaded=30; (2Q) pre- and post-loaded=2,000; (2P) pre- and post-loaded=200, and as follows in anesthetized animals: (1Q)=30; (1P)=30; (2Q) 4,000; (2P)=60. Control was 100 for unanesthetized animals and 200 in anesthetized animals.

MECHANISM OF ACTION - None given.

ADVANTAGE - The system is capable of delivering substances to animals (including humans) efficiently and avoiding disadvantages of the prior art. The carrier directs substances to the mucosa in a non-specific manner, is capable of being loaded with the substance immediately prior to administration, is of a size susceptible to microfiltration for sterilization avoiding need for preservatives and it is stable for up to 12 months, even one or more years. Biovectors have larger relative surfaces and volumes than larger microspheres or nanospheres and multiple substances can be delivered per Biovector.

pp; 27 DwgNo 0/11

Derwent Class: B07; P34
International Patent Class (Main): A61K-051/00
International Patent Class (Additional): A61M-036/14

20/7/38 (Item 9 from file: 351)
DIALOG(R)File 351:Derwent WPI

012612145
WPI Acc No: 1999-418249/199935
Fowlpox viruses, useful as vaccines for immunization of chickens/turkeys against Fowlpox and Newcastle disease virus
Patent Assignee: SYNTRO CORP (SYTR)
Inventor: COCHRAN M D; JUNKER D E
Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5925358	A	19990720	US 9324156	A	19930226	199935 B
			WO 94US2252	A	19940228	
			US 95484575	A	19950607	

Priority Applications (No Type Date): US 95484575 A 19950607; US 9324156 A 19930226; WO 94US2252 A 19940228

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5925358	A		61	A61K-039/275	Cont of application US 9324156 CIP of application WO 94US2252

Abstract (Basic): US 5925358 A

NOVELTY - A recombinant fowlpox virus comprising a foreign DNA inserted into a region of the fowlpox virus genome corresponding to a 2.8 kb EcoRI fragment, capable of being expressed in a host cell, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a vaccine comprising the recombinant fowlpox virus; and

(2) a method of immunizing an animal comprising administration of the vaccine in (1).

ACTIVITY - Anti-viral.

MECHANISM OF ACTION - Vaccine.

USE - The virus is used as a vaccine for immunizing chickens against Newcastle disease virus (NDV), Fowlpox, and Infectious Laryngotracheitis.

Three week old SPF chicks were vaccinated subcutaneously with 500 plaque forming units (pfu) of FPV/cIFN/NDV recombinant virus. Sera were collected 9 days and 28 days post vaccination to measure neutralizing antibody responses raised against NDV. All chickens were challenged 28 post vaccination with a pathogenic strain of NDV and observed for NDV induced mortality for 15 days. Results showed that vaccinated chicks developed detectable anti-NDV antibody responses 9 days post vaccination. These antibody levels were maintained for at least 28 days.

pp; 61 DwgNo 0/3

Derwent Class: B04; C06; D16

International Patent Class (Main): A61K-039/275

International Patent Class (Additional): C12N-007/01

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